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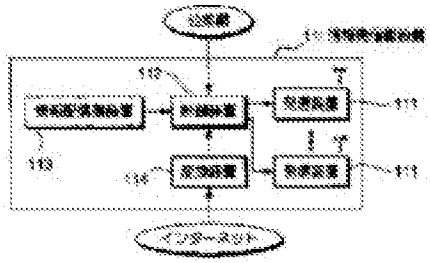
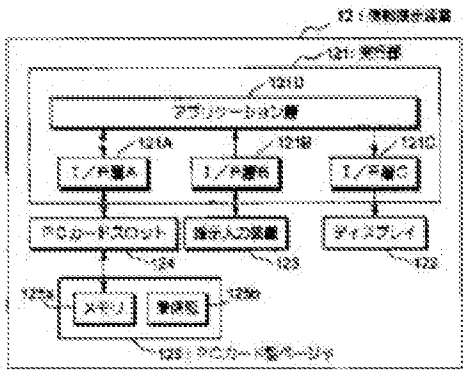
(54) DEVICE AND SYSTEM FOR PRESENTING INFORMATION AND RECORDING MEDIUM

(57)Abstract:
PROBLEM TO BE SOLVED: To provide inexpensive services while balancing quickness, blowsing and visibility almost without limiting the action of a user in an information distribution service.
SOLUTION: A device 12 is composed of a PC card type pager 125 having a reception part 125b for receiving information through a wireless block and a memory 125a for storing the information received by that reception part 125b, PC card slot 124 for loading that PC card type pager 125, execution part 121 for reading the received information from the memory 125a through that PC card slot 124, forming a display image and displaying it on a display 122, and an instruction input device 123 for inputting an instruction to the execution part 121. The information received by the PC card type pager 125 is displayed on the display 122 at timing corresponding to the state of inputting the instruction from the instruction input device 123.





* NOTICES *

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1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1]An information presenting device comprising:
A pager which receives and memorizes information via between non-railroad sections.
A processing means to read information memorized by said pager and to show a user read information.
An operating state detection means to detect an operating state of said processing means.
A control means which controls said processing means according to an operating state detected by said operating state detection means.

[Claim 2]The information presenting device according to claim 1 when said control means is [an operating state detected by said operating state detection means] a specific operating state, wherein it makes said processing means start read-out of information memorized by said pager.
[Claim 3]The information presenting device possessing an operating state setting-out means to set up said specific operating state according to said user's directions according to claim 2.
[Claim 4]The information presenting device according to claim 1 when said control means is [an operating state detected by said operating state detection means] a specific operating state, wherein it makes said processing means start presentation of information read from said pager.
[Claim 5]The information presenting device possessing an operating state setting-out means to set up said specific operating state according to said user's directions according to claim 4.
[Claim 6]The information presenting device according to claim 1, wherein said processing means repeats and shows a user information read from said pager.
[Claim 7]The information presenting device according to claim 1, wherein said processing means presents only information according to an extraction condition beforehand set up among information memorized by said pager.
[Claim 8]The information presenting device possessing an extraction condition setting-out means to set up said extraction condition according to said user's directions according to claim 7.
[Claim 9]The information presenting device according to claim 1 said processing means' having a viewing area, scrolling information read from said pager within said viewing area, and displaying it.
[Claim 10]A pager which receives and memorizes information via between non-railroad sections, and a processing means to read information memorized by said pager and to show a user read information, An information presenting device possessing a condition-of-use detection means to detect condition of use of said processing unit by said user, and a control means which controls said processing means according to condition of use detected by said condition-of-use detection means.

[Claim 11]An information service system possessing the information presenting device according to any one of claims 1 to 10 and a transmitting information device which transmits information received by said pager to wireless space.
[Claim 12]A recording medium recording a program characterized by comprising the following.
A step which is a program executed by a computer system provided with a processing means to read and show information memorized by a pager which receives and memorizes information via between non-railroad sections, and said pager, and detects an operating state of said processing means.
A step which controls said processing means according to a detected operating state.

[Translation done.]

* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]In this invention, it performs according to the information presenting device which shows a user the information received by the pager, and a computer system.
Therefore, it is related with the recording medium which recorded the program which realizes the above-mentioned information presenting device, and the information service system using the above-mentioned information presenting device.

[0002]
[Description of the Prior Art]In recent years, the data communications service which excelled the existing mass media in necessity to report speedily has appeared by the spread of the Internet, intelligent-ization of a communication terminal, etc. Service of the pull type which the user of a terminal unit accesses a data communications service actively at a server, and generally downloads information, A server is divided roughly into the service of a push type which distributes information automatically, and development of the data communications service of a push type is briskly performed from viewpoints of necessity to report speedily, the ease of the operation in a user, etc. in the present.
[0003]
[Problem(s) to be Solved by the Invention]By the way, in order to use the data communications service on the Internet under the situation where the communication terminal is not connected to the dedicated line. Usually, it connects with an Internet Service Provider by dial up via a public network or a mobile radio communication network, IP (Internet Protocol) address will be dynamically acquired from an Internet Service Provider, a server will be accessed on it, and information will be downloaded. Therefore, it will become that a merit called the necessity to report speedily of the data communications service of a push type is enjoyable, only while having connected by dial up.
[0004]Of course, whenever it continues continuing connection by dial up, the merit of the data communications service of a push type is enjoyable, but a huge amount of communication charges start. And in a connection destination (namely, Internet provider), the bandwidth of the number according to the number of contractors must be secured, and it is unreal. From the first, also when accessing the Internet via a public network, in via a dedicated line, it is necessary to connect the subscriber line of a public network to a terminal, and it has the fault that a user's action will be restricted substantially. Of course, if it is a mobile radio communication network course, connection of a subscriber line is unnecessary, but the fault that the merit of the data communications service of a push type cannot fully be enjoyed is the same as that of the case of a public network.
[0005]On the other hand, the data communications service using a pager is provided in recent years. Since a pager cannot be sent, the data communications service using a pager serves as a push type inevitably, and cheap and distribute information excellent in necessity to report speedily are realized. However, portability is apparatus thought as important, and in inspection nature,

visibility, etc. of information, a pager cannot but become disadvantageous to the environment which used the computer system as the terminal unit, when information is displayed using such apparatus.
[0006]Then, a pager and a computer are connected in order to avoid such inconvenience, The system which displays the incoming message of a pager, etc. on the display of a computer is proposed (JP,H5-30012,A and JP,H8-172655,A should be referred to for details). Although the display timing of an incoming message serves as a time of a user operating a computer and inputting predetermined directions, and a time of a pager receiving a message in this kind of system, In the case of the former, a user needs to display an incoming message actively, and a feeling of a burden (troublesomeness about operation) which is not so much different from connection by above-mentioned dial up will be given to a user. On the other hand, although the advantage of the data communications service of a push type is enjoyable, securing the latter sufficient inspection nature and visibility for a case, While display processing of information is performed whenever it receives the information transmitted every moment, and a computer mainly performs other processings, there is a possibility of making the user who is perusing the incoming message sensing troublesomeness. Of course, in order to peruse an incoming message, it is necessary to start a computer, and only in order to peruse receipt information, in operating a computer, the above "troublesomeness" does not exist, but it is hard to say that the advantage of the data communications service of a push type is fully enjoyed. Since the resources of a computer are used for display processing of an incoming message, when this display processing is performed frequently, there is also a fault that a user will reduce the processing efficiency of other processings mainly performed.
[0007]An information presenting device which is available and was cheaply excellent in balance with necessity to report speedily, inspection nature, and visibility in the data communications service of the push type without having succeeded in this invention in view of the situation mentioned above, and restricting a user's action, It aims at providing the recording medium which recorded the program which realizes the above-mentioned information presenting device, and the information service system using the above-mentioned information presenting device by performing by a computer system.
[0008]
[Means for Solving the Problem]This invention is characterized by an information presenting device comprising the following, in order to solve SUBJECT mentioned above.
A pager which receives and memorizes information via between non-railroad sections.
A processing means to read information memorized by said pager and to show a user read information.
An operating state detection means to detect an operating state or condition of use of said processing means.
A control means which controls said processing means according to an operating state or condition of use detected by said operating state detection means.
According to this composition, a user is shown information memorized by pager to timing according to a state of a processing means. That is, the user can peruse receipt information of a pager to suitable timing which does not have other processings interrupted. If it is made to perform read-out from a pager to the above-mentioned timing, a burden placed on a processing means can be reduced. It may be made to raise inspection nature and visibility by repeated and showing a user information read from a pager, or showing only information according to an extraction condition set up beforehand.
[0009]This invention is characterized by an information presenting system comprising the following, in order to solve again SUBJECT mentioned above.
An information presenting device mentioned above.
A transmitting information device which transmits information received by said pager to wireless space.
A recording medium applied to this invention in order to solve SUBJECT mentioned above, It is a

program executed by a computer system provided with a processing means to read and show information memorized by a pager which receives and memorizes information via between non-railroad sections, and said pager, It is characterized by recording a program which has a step which detects an operating state of said processing means, and a step which controls said processing means according to a detected operating state.

[0010]

[Embodiment of the Invention]Hereafter, the embodiment of this invention is described with reference to Drawings.

A: The lineblock diagram 1 is a figure showing the composition of the information service system by one embodiment of this invention, and the information origination-side equipment with which 11 transmits data to between non-railroad sections, and 12 are information presenting devices which receive data via between non-railroad sections, and show a user the information according to received data in this figure.

[0011]In the information origination-side equipment 11, 111 is a sender which sends a radio signal, as the area in a prescribed range is covered, and it is installed for every area. If it is a control device which 112 receives the directions transmitted from the public network, and controls self and two or more senders 111 based on the received directions and the directions from a message transmission person are received via a public network, The data showing the identification number and message of the information presenting device 12 contained in the directions concerned is sent by sender 111 course. The control device 112 is provided with the local memory measure (graphic display abbreviation) which memorizes the area corresponding to each information presenting device 12, and dispatch of the above-mentioned data is performed by only the sender 111 installed in the area where the information presenting device 12 of the identification number contained in directions belongs. The control device 112 will update the contents of the internal memory measure based on the identification number and area information which are included in the directions concerned, if directions of local registration are received by a public network course.

[0012]113 is an information origination-side device and transmits the identification number which shows the information (contents) to distribute and a distribution destination to the control device 112 one by one. In order to avoid that explanation becomes complicated here, it is considered as the one number of the information origination-side devices 113, but it cannot be overemphasized that it does not restrict to this. 114 is the inverter connected to the Internet, changes the E-mail received via the Internet into the information on the form which can be processed with the control device 112, and forwards it to the control device 112. The form of the transmit information from the information origination-side device 113 to the control device 112 and the form of the transmit information from the inverter 114 to the control device 112 are the same as the form of the transmit information from a public network to the control device 112.

[0013]The execution part in which 121 executes various programs in the information presenting device 12 on the other hand, The display of a liquid crystal display etc. and 123 122 Instruction input devices, such as a keyboard and a mouse, 124 is a PC Card slot based on a PCMCIA (Personal Computer Memory Card International Association) standard. The common notebook computer is equipped with each part 121-124 of the above, and the system is realized in this embodiment using the notebook computer provided with each part 121-124 of the above.

[0014]125 is the PC card type pager provided with the function of a general pager, and has the receive section 125b which receives at least the send data from the sender 111 in the area where self belongs, and the memory 125a which stores the received information (receipt information). The memory 125a is divided into the individually addressed message field which stores the receipt information peculiar to a pager addressed to an identification number, and the distribution message area which stores the specific receipt information addressed to an identification number which was common by each pager as shown in drawing 2. Here, the above-mentioned specific identification number is matched with the distribute information side device 113, and the receipt information

addressed to this identification number is the delivery information from the distribute information side device 113. Although the storing form of the receipt information in each above-mentioned message area is arbitrary, the form shown in drawing 3 shall be taken here. In drawing 3, the field which stores the flag and message which show a message number, and unread / existing ** about one receipt information, and the receipt time is provided. In each message area, a message number is a unique number and is independently set up for every message area. The initial value of a flag is "unread."

[0015]Drawing 4 is a figure showing the appearance of the PC card type pager 125. As shown in this figure, the PC card type pager 125, It has the three handlers 125A-125C and the one display panel 125D, and the user can display on the display panel 125D the receipt information stored in the internal memory by operating these handlers 125A-125C. If all the messages are displayed on the display panel 125D in that case, the PC card type pager 125 will change the flag corresponding to the message concerned into "existing **."

[0016]It is that PC Card slot 124 is equipped by direction as the PC card type pager 125 provided with the terminal area 125E and shown in drawing 5, It is constituted so that the execution part 121 can access the memory 125a in the PC card type pager 125 via PC Card slot 124 and the terminal area 125E. The memory 125a in a PC card should just be a nonvolatile rewritable memory, and it cannot be overemphasized that it is not limited to the flash memory which has spread widely.

[0017]Non volatile semiconductor memories in which the execution part 121 of drawing 1 stored the boot program etc., such as ROM (Read Only Memory) and PROM (Programmable ROM), External storages, such as a hard disk which stored various programs and data, CPU (central processing unit) which controls each part by reading and executing the various above-mentioned programs, Comprise RAM (Random Access Memory) used for the CPU concerned, and various I/O interfaces, and logically, The application layer 121D realized because CPU performs application software, It is divided into the interface (I/F) layer A121A, the interface layer B121B, and the interface layer C121C which are realized by executing each control program of PC Card slot 124, the instruction input device 123, and the display 122.

[0018]In this embodiment, one of the application software which realizes the application layer 121D is what is called a screen saver, and if the standby time of the after-mentioned [a period (uninputted period) without an input] is reached from the instruction input device 123, it will be started automatically. As this screen saver is shown in drawing 6, while carrying out the full-screen display of the background image 122A aiming at reduction of power consumption, reinforcement of a display, etc., The receipt information stored in the memory 125a in the PC card type pager 125 is read, and a scroll display is carried out into the window area 122B on the display 122, and 122C. The background image data showing two or more still pictures which make the start the above-mentioned background image 122A is stored in the external storage, and at the time of execution of a screen saver, the background image data of these plurality is read by CPU on RAM, and is used in the order set up beforehand.

[0019]Next, the item and meaning of a parameter which a user can set up are listed below about a screen saver on a notebook computer. In subsequent explanation, an "individually addressed message" is a message peculiar to each pager addressed to an identification number, and a "distribution message" is a message addressed to an identification number assigned in common with two or more pagers. Since the setting method of the parameter by a user is a matter which should be designed suitably, the explanation is omitted.

[0020](1) Standby time standby time expresses the non-input time to starting of a screen saver.
(2) Background image switching time background image switching time expresses the time interval which changes the background image to display.
(3) display-message classification display-message classification expresses the classification of the message to display ---- as the choice ---- "nothing"/"individually addressed message" ---- /"distribution message" ---- / "both" is prepared.

[0021](4) Individually addressed message effective lapsed time individually addressed message effective lapsed time expresses the term of validity of the individually addressed message to display, and in order that the lapsed time from the receipt time may avoid the display of the individually addressed message beyond individually addressed message effective lapsed time, it is set up.
(5) An individually addressed message display attribute individually addressed message display attribute expresses the display attributes (a font text, character size, character decoration, a character color, a character background color, transmissivity, etc.) of an individually addressed message.
(6) The newest individually addressed message display attribute newest individually addressed message display attribute expresses the display attribute of the individually addressed message of the newest [receipt time].
(7) An unread individually addressed message display attribute unread individually addressed message display attribute expresses the display attribute of an unread individually addressed message.
(8) An individually addressed message scroll rate individually addressed message scroll rate expresses the scroll rate in the display of an individually addressed message.
[0022](9) Distribution message effective lapsed time distribution message effective lapsed time expresses the term of validity of the distribution message to display, and in order that the lapsed time from the receipt time may avoid the display beyond distribution message effective lapsed time of a distribution message, it is set up.
(10) A distribution message indicator attribute distribution message indicator attribute expresses the display attribute of a distribution message.
(11) The newest distribution message indicator attribute newest distribution message indicator attribute expresses the display attribute of the distribution message of the newest [receipt time].
(12) An unread distribution message indicator attribute unread distribution message indicator attribute expresses the display attribute of an unread distribution message.
(13) A distribution message scroll rate distribution message scroll rate expresses the scroll rate in the display of a distribution message.
(14) A keyword keyword expresses the specific key third base who considers it as the display attribute conspicuous in the distribution message.
(15) A keyword table Shimesu attribute keyword display attribute expresses the display attribute of a keyword.
[0023]The initial value of "transmissivity" of a character color and a character background color is 0%, by setting up this transmissivity more highly than 0%, with the background of the character itself and a character being translucent (or transparent), it becomes and the user can recognize visually some or all of a background image that is behind a window area. However, by this embodiment, since it will become impossible for a user to recognize a character visually if both the transmissivity of a character color and a character background color is set to 100%, input restrictions are added so that such setting out cannot be performed.
[0024]Next, the concrete contents of processing of the execution part 121 at the time of screen saver operation are explained with reference to drawing 7. As non-input time exceeds standby time, and drawing 7 is a figure showing the flow of processing by the execution part 121 in the state where the screen saver started and shows it in this figure, the execution part 121, First, while displaying completely the background image 122A which considered the screen saver function (function which displays a background image) as one, and was set up beforehand on the display 122, In the window areas 122B and 122C in drawing 6, the scroll display of the display image corresponding to each is started (Step S1).
[0025]Henceforth, while a screen saver function is one and the above-mentioned scroll display is continued, the background image displayed is changed with the time interval according to the setting parameters of background image switching time. In this embodiment, the scroll direction in the

window area 122B From the bottom to a top. The scroll direction in the window area 122C is the left from the right, and the scroll rate in each window area turns into speed specified with the above-mentioned individually addressed message scroll rate and the distribution message scroll rate. A user may enable it to choose arbitrarily although the scroll direction is fixed in the direction set up beforehand in this embodiment.

[0026]In the above-mentioned processing, the execution part 121 judges whether the individually addressed message received within the term of validity in the memory 125a of the PC card type pager 125 exists (Step S2), In existing, it generates the display image for reading the individually addressed message received by the PC card type pager 125, and displaying the read individually addressed message (Step S3). The execution part 121 specifically from the receipt information stored in the memory 125a in the PC card type pager 125. The receipt time is within the term of validity (period specified by current time and the setting parameters of individually addressed message effective lapsed time), And while reading the receipt information of the receipt time nearest to object time and generating a display image based on the read receipt information henceforth [object time], let the receipt time of the receipt information concerned be object time. The initial value of "object time" is current time, and the current time at the time is compulsorily set up as object time after reading the receipt information (oldest receipt information) of the earliest receipt time within the term of validity. The display image generated here is a bitmapped image for carrying out the scroll display of the individually addressed message from the right to the left in the window area 122C, and turns into a picture which arranged the pixel sequence rightward in order (refer to drawing 8).

[0027]The display image generated in the execution part 121, In [are a picture which consists of two or more pixel sequences, and] the execution part 121, According to a message (character string), the meaning (a foreground/background) of each pixel is determined, and a character color and a character background color are determined between each message according to the memory site, a flag, an individually addressed message display attribute, the newest individually addressed message display attribute, and an unread individually addressed message display attribute. For example, as for the character color of the newest individually addressed message, "yellow" and a flag are determined, and, as for the character color of an "unread" message, the color of each pixel is determined like "blue." Although the flag of the first, newest individually addressed message to be displayed is "unread", the character color of the message concerned turns into a color (the above-mentioned example "yellow") set up by the newest individually addressed message display attribute.

[0028]In this embodiment, when displaying the individually addressed message displayed once on the 2nd times, he is trying to display as an existing ** message, and the execution part 121 grasps whether the whole sentence of the individually addressed message was displayed. In the generate time of a display image, the execution part 121 calculates the number of the pixel sequences which constitute a display image, and stores in the register inside CPU the number of times of unit scrolling for every predetermined dot which will be performed by the time it displays all these pixel sequences (number of times of existing ** scrolling). When the number of times of unit scrolling which the execution part 121 had calculated the number of times of unit scrolling from a screen saver starting time, and was calculated is in agreement with the number of times of existing ** scrolling, If the flag corresponding to a message on display is "unread", the flag concerned stored in the memory 125a in the PC card type pager 125 will be changed into "existing **." Therefore, about an unread message, the character color of a message will be changed and displayed in the 1st scroll display and the 2nd scroll display. After the execution part 121 displays all the messages briefly, it resets the number of times of unit scrolling, and shifts to the 2nd scroll display processing. In the judgment of Step S2, when the individually addressed message received within the term of validity does not exist but a decision result is set to "NO", the display image for telling a user that the individually addressed message received within the term of validity does not exist is generated (step

S4).
[0029]The execution part 121 performs processing to the individually addressed message mentioned above, and same processing about a distribution message after processing of the above-mentioned step S3 or S4 (Steps S5-S7). However, the execution part 121 searches the keyword beforehand set up in the distribution message which received within the term of validity (period specified by current time and the setting parameters of distribution message effective lapsed time), and pinpoints the position here. And the display image generated to the distribution message which received within the term of validity, Generated on the assumption that it turns a scroll display up from the bottom in the window area 122B, the color of each pixel turns into a color based on a distribution message indicator attribute, the newest distribution message indicator attribute, an unread distribution message indicator attribute, and a keyword table Shimesu attribute.
[0030]When the above-mentioned processing is followed, it judges whether the execution part 121 had a certain input with the instruction input device 123 (Step S8) and no directions are inputted, the processing after Step S2 is repeated. On the contrary, when there is a certain input and the decision result of Step S8 is set to "YES", the execution part 121 makes a screen saver function off, and ends processing. The PC card type pager 125 is not concerned with the operating state of the execution part 121, but continues and always performs the reception of the message by the receive section 125b, and the storing process of the incoming message to the memory 125a.
[0031]B: Explain the example of use, next the example of use of the information service system of composition of having mentioned above. In display-message classification, standby time here background image switching time for 10 seconds for 5 minutes However, "both", Individually addressed message effective lapsed time and distribution message effective lapsed time 5 hours, The character decoration in an individually addressed message display attribute and a distribution message indicator attribute, Character decoration [in / "usually" / in a character color and transmissivity / "white", 100% the newest individually addressed message display attribute, and a distribution message indicator attribute], Character decoration [in / in a character color and transmissivity / a "bold letter", "yellow", 100%, an unread individually addressed message display attribute, and a distribution message indicator attribute], Character decoration [in / transmissivity / a character color and / in a "bold letter", "blue", 100%, and a keyword / "http:*" and a keyword table Shimesu attribute], a character color, a character background color, and transmissivity shall be a "bold letter", "black", "white", and 0%. "*" in a keyword shows arbitrary character strings.
[0032]Regardless of whether the screen saver has started, the receipt information of the PC card type pager 125 is matched with the receipt time, and is stored in the memory 125a. Under the present circumstances, in the PC card type pager 125, processing which the receipt time deletes sequentially from the oldest message is performed so that capacity of the field where the total amount of receipt information corresponds may not be exceeded.
[0033]A screen saver is not started when the non-input time by the instruction input device 123 is less than 5 minutes. Therefore, a user will continue other work using a computer, without recognizing reception of a message. On the contrary, when the non-input time by the instruction input device 123 reaches in 5 minutes, a screen saver is started and the display according to the above-mentioned parameter is performed. While the background image 122A is changed every 10 seconds, specifically in the window areas 122B and 122C of the display 122, the scroll display of a distribution message and the individually addressed message is carried out with a predetermined scroll rate. In each window area, it is expressed using the character of the attribute according to the kind (usual, the newest / unread) of message. In the window area 122B, a background is displayed for the character string "http://www. ----" in a message, in white black figures.
[0034]And when it is going to resume other work and a user operates the instruction input device 123, a screen saver can be completed and the user can continue other work. About an unread message, the color of a foreground serves as "blue" only at the time of the 1st scroll display, and

the color of a foreground serves as "white" after the time of the 2nd scroll display. This is also the same as when the PC card type pager 125 is sampled from a notebook computer and an incoming message is displayed independently, and the message already displayed on the display 122 is displayed as an existing ** message. If new receipt information is stored in the memory 125a of the PC card type pager 125 during operation of a screen saver, in the following scroll cycle, the message contained in the information concerned will be displayed as a newest message.
[0035]C: As more than the conclusion explained, according to this embodiment, wired connection of the computer cannot be carried out, but ** can also use the data communications service of a push type cheaply. Without interrupting other a user's processings by having given the incoming message display function to the screen saver started at the idle time (and a user's idle time) of a notebook computer, the resources which are not used can be utilized and an incoming message can be displayed. And since the scroll display function of the incoming message was provided in the screen saver, the user can read all the incoming messages, without doing anything. Since the incoming message was stored in the PC card type pager 125, only PC card type pager 125 can peruse an incoming message.
[0036]D: In the embodiment which is a supplement and which was mentioned above, the method of presentation of an incoming message may adopt not only a scroll display but arbitrary methods. For example, the method which is changed, it may be made to display with a predetermined time interval, and fade-in/fade-out, wipe, etc. change like a background image is also arbitrary. Although the example which displays only a specific keyword with the attribute set up beforehand was shown, it may be made to express the message containing a specific keyword as the attribute set up beforehand. Plurality may be sufficient as a keyword and it may be made to specify it combining logical operators, such as AND and OR.
[0037]If the background image of a greatly different color from a character color is used, the visibility of a message can be raised more. It may be made to perform selection of a background image manually, the information showing the fundamental color of a background image is matched with a background image, and it may be made to choose a background image automatically according to these character colors at the time of setting out of various character colors. It may be made to search for the fundamental color of a background image statistically from the classification-by-color cloth of a background image. Of course, it may be made to choose a character color automatically according to a background image. It may be made for becoming hard to see to emit warning about a positive combination at the time of setting out of a character color or a background image. It is good also as video, a background image is chosen from the group of various still pictures, and it may be made to compensate the monotony of the display in a window area.
[0038]Not only a display but read-aloud software is used, and it may be made for a sound to notify the contents of the incoming message. Although the information which has only a text message as receipt information was illustrated, it may be the information which included binary data, such as not only this but a sound, and a picture. In this case, it is necessary to change a presenting method suitably according to the kind of data. Not the data itself but a parameter is transmitted and it may apply to the system which generates data based on a receiving parameter by a receiver.
[0039]The display function of an incoming message may be combined with software other than a screen saver, and it may be made to start only the display software of a message independently. For example, when it combines with an operating system and the non-access periods to external storages, such as a hard disk, turn into beyond predetermined time, it may always be made to carry out the scroll display of an individually addressed message or the distribution message to a predetermined viewing area. Of course, it may be made to display only the newest incoming message and unread incoming message, and may be made to fluctuate the area of a viewing area according to the load concerning CPU, etc. The action of an instruction input device is not supervised, but publicly known sensing devices, such as a line of sight detection device, are used, and a user may be made to presume the period which is not using the computer. According to a user's directions, it

may be made to carry out the scroll display of the message in a window area. When forming a scroll bar in a window area, operating this scroll bar in that case and specifying a jump destination manually, it may be made to carry out the view as popup of the receipt time of a jump destination.
[0040]When the display of the following message is started, may be made to make the last message into "existing **", and, "Unread"/"existing **" is not changed but it may be made to change "unread"/"existing **" only based on the operation in the PC card type pager 125 in the display on a screen saver. The receipt information in the memory 125a of the PC card type pager 125 is read, and it stores in RAM of a notebook computer, and may be made to generate a display image based on the receipt information on RAM at the time of a screen saver startup. In this case, the timing from which a notebook computer reads the receipt information in the PC card type pager 125 is arbitrary, and when the load concerning a notebook computer becomes light, it may be made to read receipt information automatically.
[0041]Although portability was thought as important and the information presenting device 12 was realized using the notebook computer, if it has each part 121–124, it cannot be overemphasized that it may be a desktop computer or may be what is called a Personal Digital Assistant (PDA). Although the example using a PC card type pager was shown in consideration of portability and the ease of wearing, The kind of interface to a pager and a computer is arbitrary, for example, may adopt RS–232C, USB (Universal Serial Bus), an infrared ray interface, and a wireless interface. If a wireless interface is adopted especially, the same processing as the embodiment above–mentioned into a pocket put [the pager] is realizable.
[0042]Although distribute information origin gave one example, it is as above–mentioned that plurality may be sufficient, and it is arbitrary. [of the classifying method of the incoming message in that case] For example, in [may make it memorize in the PC card type pager 125 to the field which was attached to the message and which classifies and corresponds for every identification number, and] information dispatch origin, The information on information dispatch origin (or Type of service) is embedded and distributed into a message, and in the execution part 121, the contents of the incoming message are investigated and it may be made to indicate by classification.
[0043]Although the memory 125a in the PC card type pager 125 is accessed and the display image was generated, The memory 125a is not formed, but the incoming message of the PC card type pager 125 is immediately transmitted to the computer side, and it may enable it to generate a display image, without accessing the memory 125a. Although the example which supplies the setup instruction of the area where a pager belongs to the control device 112 via a public network was shown, if there is a device which changes the signal on the Internet into the above–mentioned setup instruction, the above–mentioned setup instruction can be supplied to the control device 112 via the Internet.
[0044]
[Effect of the Invention]As explained above, according to this invention, a user is shown the information memorized by the pager to the timing according to the state of the processing means, and the user can peruse the receipt information of a pager to suitable timing (for example, timing excellent in necessity to report speedily). If it is made to perform read–out from a pager to the above–mentioned timing, the burden placed on a processing means can be reduced. Inspection nature and visibility can be raised by repeating and showing a user the information read from the pager, or showing only the information according to the extraction condition set up beforehand. That is, according to this invention, the data communications service of a push type can be used cheaply, without restricting a user's action, balancing necessity to report speedily, inspection nature, and visibility.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a figure showing the composition of the information service system by one embodiment of this invention.
[Drawing 2]It is a figure showing the logical organization of the memory 125a of the PC card type pager 125 in the information presenting device 12 of a same system.
[Drawing 3]It is a figure showing the storing form of the receipt information in the memory 125a of the said PC card type pager 125.
[Drawing 4]It is a figure showing the appearance of the said PC card type pager 125.
[Drawing 5]It is a figure showing signs that PC Card slot 124 is equipped with the said PC card type pager 125.
[Drawing 6]It is a figure showing the appearance of the PC card type pager 125 in the sympathy news presentation system 12.
[Drawing 7]It is a flow chart which shows the flow of processing by the execution part 121 in the sympathy news presentation system 12 when application software is working.
[Drawing 8]It is a figure showing an example of the display image of the individually addressed message in the sympathy news presentation system 12.
[Description of Notations]
11 [— Information origination-side device,] — Information origination-side equipment, 111 — A sender, 112 — A control device, 113 114 — An inverter, 12 — An information presenting device, 121 — An execution part, 121A—I/F layerA, 121B—I/F layerB, 121C—I/F layerC, 122 [— A PC card type pager, 125a / — A memory, 125b / — Receive section] — A display, 123 — An instruction input device, 124 — A PC Card slot, 125

[Translation done.]

* NOTICES *

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damages caused by the use of this translation.

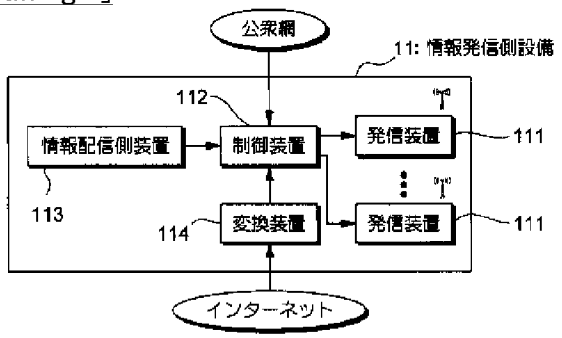
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

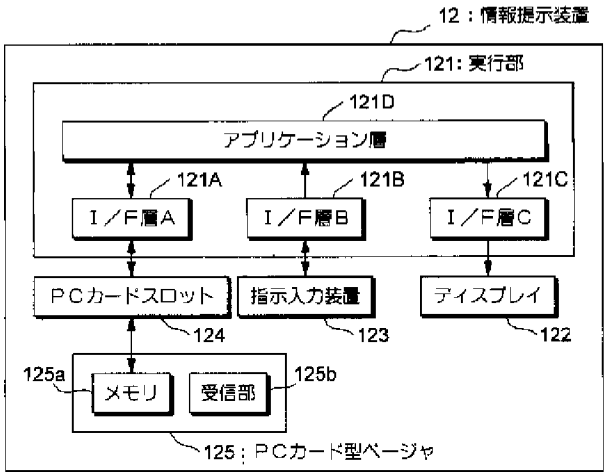
DRAWINGS

[Drawing 3]

メッセージ番号	フラグ	メッセージ	受信時刻

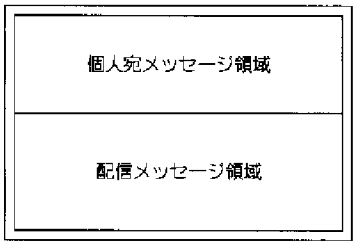
[Drawing 1]



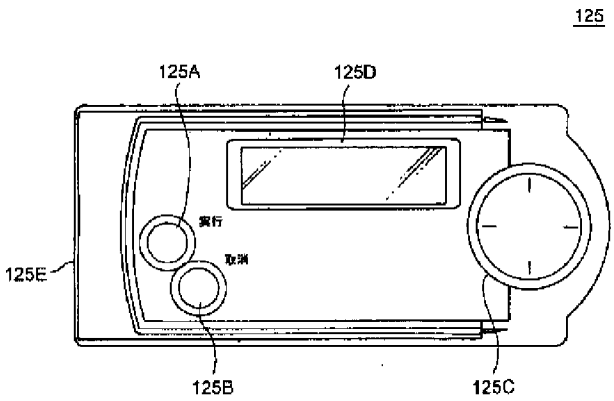


[Drawing 2]

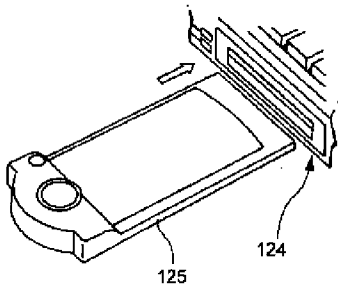
125A



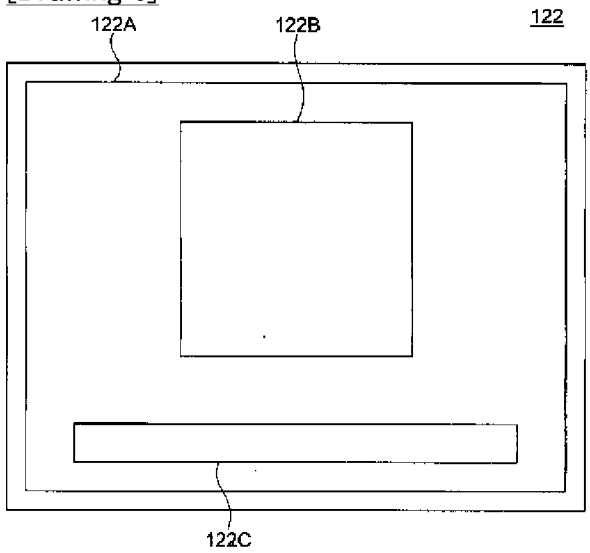
[Drawing 4]



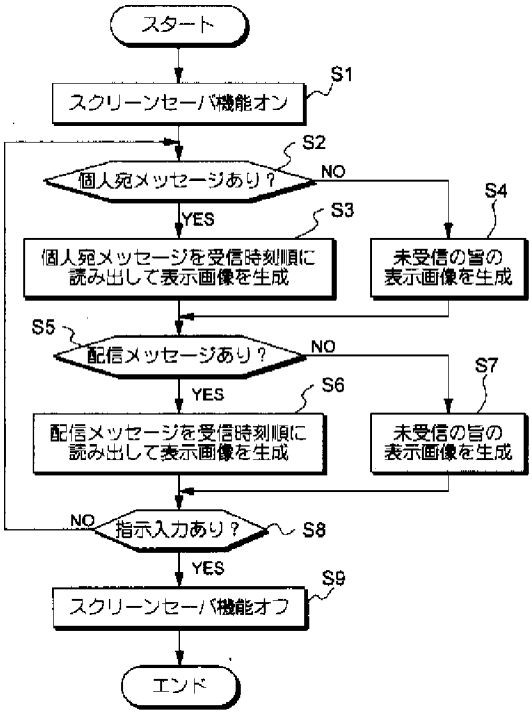
[Drawing 5]



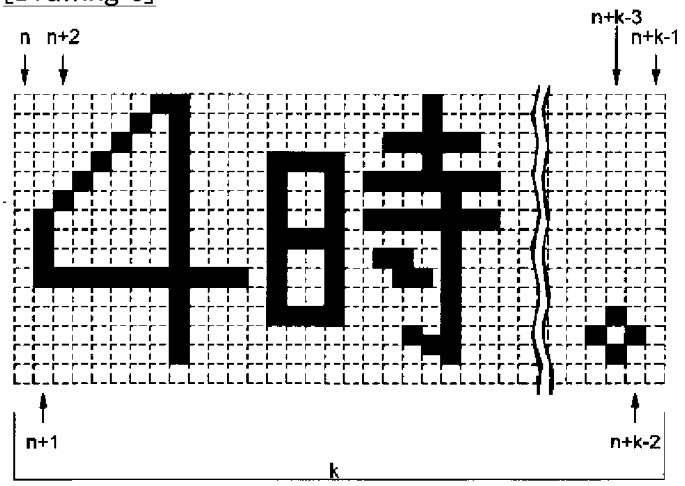
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]